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### REMARKS

Claims 1-5 and 7-19 are all the claims presently pending in the application. Claims 1 and 4-5 are amended to more clearly define the invention. Claims 1, 4, and 13 are independent.

These amendments are made only to more particularly point out the invention for the Examiner and not for narrowing the scope of the claims or for any reason related to a statutory requirement for patentability.

Applicant also notes that, notwithstanding any claim amendments herein or later during prosecution, Applicant's intent is to encompass equivalents of all claim elements.

Entry of this §1.116 Amendment is proper. Since the Amendments above narrow the issues for appeal and since such features and their distinctions over the prior art of record were discussed earlier, such amendments do not raise a new issue requiring a further search and/or consideration by the Examiner. As such, entry of this Amendment is believed proper and Applicant earnestly solicits entry. No new matter has been added.

Claims 1-5 and 7-19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by the Nakamura et al. reference.

This rejection is respectfully traversed in the following discussion.

#### **I. THE CLAIMED INVENTION**

An exemplary embodiment of the claimed invention, as recited by, for example, independent claim 1, is directed to a rotation angle detecting device that includes a target with a magnetic member connected integrally rotatably with a rotary member and a plurality of

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magnetic sensors arranged to face confront the magnetic member for outputting signals according to a rotation of the rotary member. The magnetic sensors respectively include semiconductor MR elements. At least some of the semiconductor MR elements are formed over and integrally with a common cell of a semiconductor wafer.

Conventional rotation angle detecting devices have problems that are caused by the differences between the materials with which the MR elements are formed. The differences in materials prevent the MR elements from having waveforms which are identical. For example, the differences in the materials may cause a difference in electrical sensitivity to temperature.

In stark contrast, the present invention solves these problems by providing a rotation angle detecting device that includes at least some semiconductor MR elements that are formed over and integrally with a common cell of a semiconductor wafer. In this manner, the present invention minimizes any differences in the materials of the semiconductor MR elements and, as a result, improves the uniformity of the electrical characteristics of these semiconductor MR elements (page 18, line 21 - page 19, line 9).

## II. THE PRIOR ART REJECTION

Regarding the rejection of claims 1-5 and 7-19, the Examiner alleges that the Nakamura et al. reference teaches the claimed invention. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by the Nakamura et al. reference.

Should Examiner Miller continue to allege that the Nakamura et al. reference discloses

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the features of the claimed invention, Applicant respectfully requests that the Examiner comply with the requirements of M.P.E.P. § 707.5.

Note that MPEP 707.05 states:

*"During the examination of an application or reexamination of a patent, the examiner should cite appropriate prior art which is nearest to the subject matter defined in the claims. When such prior art is cited, its pertinence should be explained." (Emphasis added).*

In particular, the Examiner's alleged significance of the Nakamura et al. reference regarding: 1) where in Figure 25 the Examiner finds a semiconductor wafer on which MR elements are formed; 2) where in Figure 25 the Examiner alleges that there is an illustration of forming MR elements; and 3) where in Figure 25 the Examiner alleges that there is a teaching of forming MR elements on a common cell of a semiconductor wafer is not explained by the Examiner.

The Examiner's alleged significance of how any of the claimed features correspond to the particular elements disclosed by the Nakamura et al. reference is murky, at best, as the Office Action did not explain the pertinence of this reference to the specific elements which are recited by the claims being rejected, as required by M.P.E.P. § 707.5.

To assist Applicant's understanding, Applicant hereby respectfully requests that the Examiner comply with the requirements of M.P.E.P. § 707.05 by explaining in detail the correspondence between the specific features recited by claims 1-5 and 7-19 and the particular portions of the Nakamura et al. reference.

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The Examiner's rejection also fails to comply with 37 C.F.R. §1.104(c)(2) which requires that "the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified."

In this case, the Examiner's rejection fails to point out which of the particular parts relied on that are disclosed by the Nakamura et al. reference correspond to the features regarding: 1) where in Figure 25 the Examiner finds a semiconductor wafer on which MR elements are formed; 2) where in Figure 25 the Examiner alleges that there is an illustration of forming MR elements; and 3) where in Figure 25 the Examiner alleges that there is a teaching of forming MR elements on a common cell of a semiconductor wafer.

To further the prosecution of this application, however, Applicant has again closely reviewed the Nakamura et al. reference to address the clear differences between the Nakamura et al. reference and the claims.

The Nakamura et al. reference does not teach or suggest the features of the claimed invention including semiconductor MR elements that are formed over and integrally with a common cell of a semiconductor wafer as recited by independent claims 1, 4, and 13. As explained above, this feature is important for minimizing any differences in the materials of the semiconductor MR elements so that the uniformity of the electrical characteristics of these semiconductor MR elements is improved.

Contrary to the Examiner's allegation, the Nakamura et al. reference does not teach or suggest this feature.

Indeed, the Nakamura et al. reference does not even teach or suggest forming

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semiconductor elements with a common semiconductor wafer, let alone a common cell of a semiconductor wafer.

Rather, the only mention that the Nakamura et al. reference makes concerning forming a semiconductor MR element over and integral to a semiconductor wafer is in paragraphs [0055] and [0056]. The Nakamura et al. reference explains "Each of the magnetoresistive elements 21 and 22 is constructed with a substrate 23, a magnetoresistive pattern 27, and terminal electrodes 24a and 24b as show in Fig. 3 (only the magnetoresistive element 21 is shown in Fig. 3 as an example.)" [0055].

Further, Figure 3 of the Nakamura et al. reference clearly only illustrates a single MR element 21 on a substrate and does not teach or suggest forming semiconductor elements with a common semiconductor wafer, let alone a common cell of a semiconductor wafer.

In the Response to Arguments section of the December 1, 2004, Office Action, Examiner Miller alleges that "Fig. 25 clearly shows MR elements 121-128 being formed over and (sic) integral with a semiconductor wafer."

However, contrary to the Examiner's allegation, Figure 25 does not illustrate any MR elements being formed at all, let alone forming semiconductor elements with a common semiconductor wafer, or a common cell of a semiconductor wafer as recited by the independent claims. In other words, the Examiner's reference to Figure 25 of the Nakamura et al. reference clearly does not support the Examiner's allegations.

Rather, Figure 25 of the Nakamura et al. reference illustrates a ninth embodiment of a torque sensor 141 which includes a magnetic sensor unit 142. The description of Figure 25 in the

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Nakamura et al. reference is found at [0103] to [0110].

In particular, the Nakamura et al. reference explains that "The magnetic sensor unit 142 contains four magnetic sensors, and is provided with magnetoresistive elements 121 to 128 and magnets M1 to M4." [0104]. In other words, Figure 25 and the description that accompanies Figure 25 in the Nakamura et al. reference merely describes the construction of the magnetic sensor unit 142 and explains that the magnetic sensor unit 142 includes MR elements 121 to 128.

Figure 25 and the accompanying description of Figure 25 does not teach or suggest anything at all that is even remotely related to forming any MR elements, let alone forming MR elements on a common semiconductor wafer or forming MR elements on a common cell of a semiconductor wafer.

Further, Applicant notes that the Examiner's Response to Arguments did not allege anything at all regarding a common cell of a semiconductor wafer.

Again, as explained above, the present invention is directed to forming semiconductor MR elements on a common cell of a semiconductor wafer.

The Nakamura et al. reference only teaches forming a semiconductor MR element at [0055] and [0056] with reference to Figure 3. That description only discloses forming a single MR element and, indeed, illustrates "only the magnetoresistive element 21."

Therefore, the Nakamura et al. reference clearly does not teach or suggest forming semiconductor MR elements on a common cell of a semiconductor wafer.

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 1-5 and 7-19.

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### III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that claims 1-5 and 7-19, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

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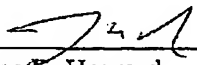
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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date:

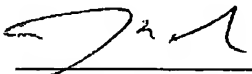
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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Amendment by facsimile with the United States Patent and Trademark Office to Examiner Takisha S. Miller, Group Art Unit 2855 at fax number (703) 872-9306 this 1<sup>st</sup> day of March, 2005.

  
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